

IN THE CLAIMS

Please cancel claims 1-33 and add new claims 34-74 as follows.

1-33. (Cancelled)

34. (New) A data structure stored in a machine-readable medium for use by a first network device in providing a packet to be forwarded to a second network device comprising:

a first field containing a virtual metropolitan area network (VMAN) type; and

a second field containing a VMAN identifier (ID) specifying a VMAN associated with a domain from which the packet originated.

35. (New) The data structure stored in the machine-readable medium of claim 34, wherein the first field and the second field each have a length of two bytes.

36. (New) The data structure stored in the machine-readable medium of claim 34, further comprising a third field containing a virtual local area network (VLAN) type and a fourth field containing a VLAN ID identifying a VLAN from which the packet originated.

37. (New) The data structure stored in the machine-readable medium of claim 36, wherein the third field and the fourth field each have a length of two bytes.

38. (New) The data structure stored in the machine-readable medium of claim 36, further comprising a fifth field containing a media access control (MAC) source address specifying a host from which the packet originated and a sixth field containing a MAC destination address specifying a host to which the packet will be forwarded.

39. (New) The data structure stored in the machine-readable medium of claim 38, further comprising a seventh field containing information indicating the packet's type or length.

40. (New) The data structure stored in the machine-readable medium of claim 39, further comprising an eighth field containing user data.

41. (New) The data structure stored in the machine-readable medium of claim 34, wherein the second field containing a VMAN ID specifying a VMAN associated with a domain from which the packet originated comprises the second field containing a VMAN ID specifying a VMAN associated with a customer domain from which the packet originated.

42. (New) An article of manufacture comprising:

a machine-accessible medium including content that when accessed by a machine causes the machine to construct a data structure for use by a first network device in providing a packet to be forwarded to a second network device, the data structure including:

a first field containing a virtual metropolitan area network (VMAN) type; and

a second field containing a VMAN identifier (ID) specifying a VMAN associated with a domain from which the packet originated.

43. (New) The article of manufacture of claim 42, wherein the machine-accessible medium including content that when accessed by a machine causes the machine to construct a data structure comprises machine-accessible medium including content that when accessed by a machine causes the machine to construct a data structure including a third field containing a virtual local area network (VLAN) type and a fourth field containing a VLAN ID identifying a VLAN from which the packet originated.

44. (New) The article of manufacture of claim 43, wherein the first field, the second field, the third field, and the fourth field each have a length of two bytes.

45. (New) The article of manufacture of claim 43, wherein the machine-accessible medium including content that when accessed by a machine causes the machine to construct a data structure comprises machine-accessible medium including content that when accessed by a machine causes the machine to construct a data structure including a fifth field containing a media access control (MAC) source address specifying a host from which the packet originated and a sixth field containing a MAC destination address specifying a host to which the packet will be forwarded.

46. (New) The article of manufacture of claim 45, wherein the machine-accessible medium including content that when accessed by a machine causes the machine to construct a data structure comprises machine-accessible medium including content that when accessed by a machine causes the machine to construct a data structure including a seventh field containing information indicating the packet's type or length.

47. (New) The article of manufacture of claim 46, wherein the machine-accessible medium including content that when accessed by a machine causes the machine to construct a data structure comprises machine-accessible medium including content that when accessed by a machine causes the machine to construct a data structure including an eighth field containing user data.

48. (New) The article of manufacture of claim 42, wherein the machine-accessible medium including content that when accessed by a machine causes the machine to construct a data structure including a second field containing a VMAN ID specifying a VMAN associated with a domain from which the packet originated comprises machine-accessible medium including content

that when accessed by a machine causes the machine to construct a data structure including a second field containing a VMAN ID specifying a VMAN associated with a customer domain from which the packet originated.

49. (New) A method comprising:

receiving a data packet at a first switch;

tagging the data packet at the first switch with a VMAN tag, the VMAN tag including a VMAN type and a VMAN identifier (ID) that specifies the VMAN associated with a domain from which the data packet originated; and

forwarding the tagged data packet towards a second switch.

50. (New) The method of claim 49, wherein forwarding the tagged data packet towards a second switch comprises forwarding the tagged data packet towards a second switch according to the VMAN ID.

51. (New) The method of claim 49, wherein receiving a data packet at a first switch comprises receiving at a first switch a tagged data packet that includes a virtual local area network (VLAN) type and a VLAN ID specifying the VLAN from which the data packet originated.

52. (New) The method of claim 51, wherein forwarding the tagged data packet towards a second switch comprises forwarding the tagged data packet towards a second switch according to the VMAN ID and the VLAN ID.

53. (New) The method of claim 49, wherein forwarding the tagged data packet towards a second switch comprises forwarding the tagged data packet towards a second switch according to the VMAN ID and a Media Access Control (MAC) destination address.

54. (New) The method of claim 49, wherein the data packet received at the first switch is an Institute of Electrical and Electronics Engineers (IEEE) 802.1Q tagged frame.

55. (New) The method of claim 49, wherein the tagged data packet has a length four bytes more than the length of the data packet received at the first switch.

56. (New) The method of claim 49, wherein tagging the data packet with a VMAN tag that includes a VMAN ID that specifies the VMAN associated with a domain from which the data packet originated comprises tagging the data packet with a VMAN tag that includes a VMAN ID that specifies the VMAN associated with a customer domain from which the data packet originated.

57. (New) An apparatus comprising:

a first switch to tag each data packet with a VMAN identifier (ID) and to forward the tagged data packet towards a second switch.

58. (New) The apparatus of claim 57, wherein the data packets received at the first switch are Institute of Electrical and Electronics Engineers (IEEE) 802.1Q tagged frames.

59. (New) The apparatus of claim 57, wherein the first switch to forward the data packet towards a second switch comprises the first switch to forward the data packet towards a second switch according to the VMAN ID.

60. (New) The apparatus of claim 57, wherein the data packets received at the first switch are tagged data packets that each have a virtual local area network (VLAN) ID that specifies the VLAN from which the data packet originated.

61. (New) The apparatus of claim 60, wherein the first switch to forward the data packet towards a second switch comprises the first switch to forward the data packet towards a second switch according to the VLAN ID and the VMAN ID.

62. (New) The apparatus of claim 60, wherein a field containing the VLAN ID has a length of two bytes.

63. (New) The apparatus of claim 57, wherein each tagged data packet has a length four bytes more than the length of the data packet received at the first switch.

64. (New) A method comprising:

receiving an encapsulated data packet at a first switch, the encapsulated data packet including a header that specifies a VMAN type and a VMAN identifier (ID) identifying the VMAN from which the data packet originated;

removing the header from the data packet at the first switch; and
forwarding the data packet.

65. (New) The method of claim 64, wherein receiving an encapsulated data packet at the first switch comprises receiving at the first switch an encapsulated data packet that includes a virtual local area network (VLAN) tag specifying a VLAN type and a VLAN ID identifying the VLAN from which the data packet originated.

66. (New) The method of claim 65, wherein forwarding the data packet comprises forwarding the data packet according to the VLAN ID and the VMAN ID.

67. (New) The method of claim 65, wherein a field that contains the VMAN type, VMAN ID, VLAN type, or VLAN ID has a length of two bytes.

68. (New) The method of claim 64, wherein receiving an encapsulated data packet at the first switch that includes a header that specifies a VMAN type and a VMAN ID identifying the VMAN from which the data packet originated comprises receiving an encapsulated data packet at the first switch that includes a header that specifies a VMAN type and a VMAN ID identifying the VMAN associated with a customer domain from which the data packet originated.

69. (New) An apparatus comprising:

a first switch to receive from a second switch data packets that are each tagged with a VMAN tag, to remove the VMAN tag from each data packet, and to forward each data packet.

70. (New) The apparatus of claim 69, wherein the VMAN tag includes a VMAN type and a VMAN ID identifying the VMAN from which the packet originated.

71. (New) The apparatus of claim 69, wherein the VMAN tag includes a VMAN type and a VMAN ID identifying the VMAN associated with a customer domain from which the packet originated.

72. (New) The apparatus of claim 70, wherein a field that contains the VMAN type or VMAN ID has a length of two bytes.

73. (New) The apparatus of claim 70, wherein each data packet received at the first switch is also tagged with a virtual local area network (VLAN) ID that specifies the VLAN from which the data packet originated.

74. (New) The apparatus of claim 73, wherein the first switch to forward each data packet comprises the first switch to forward each data packet according to the VLAN ID and the VMAN ID.